5

10

RECEIVED
CENTRAL FAX CENTER
MAR 2 2 2407

Claim Amendments

1. (Original) A fuel cell, comprising:

an anode support plate and a cathode support plate and a membrane electrode assembly disposed between said anode and cathode support plates, said membrane electrode assembly comprising a polymer electrolyte membrane, at least one of said support plates comprising a hydrophilic substrate layer having pores therein;

a water transport plate adjacent to each said hydrophilic substrate layer, each said water transport plate having a passageway for a water stream and another passageway for a reactant gas stream; and

a partially hydrophobic porous carbon fluoropolymer particulate composite diffusion layer disposed between at least one said hydrophilic substrate layer and said membrane electrode assembly, each said diffusion layer comprising about 10% fluoropolymer by weight.

2. (Original) A fuel cell according to claim 1 wherein:

said diffusion layer comprises a fluoropolymer selected from the group consisting of polytetrafluoroethylene, fluorinated ethylene propylene, polytetrafluoroethylene-coperfluoromethyl vinylether, copolymers of ethylene and tetrafluoroethylene, copolymers of ethylene and chlorotrifluoroethylene, polyvinylidene fluoride, polyvinyl fluoride and amorphous fluoropolymers.

3. (Original) A fuel cell, comprising:

an anode support plate and a cathode support plate and a membrane electrode assembly disposed between said anode and cathode support plates, said membrane electrode assembly comprising a polymer electrolyte membrane, at least one of said support plates comprising a hydrophilic substrate layer having pores therein;

a water transport plate adjacent to each said hydrophilic substrate layer, each said water transport plate having a passageway for a water stream and another passageway for a reactant gas stream; and

a diffusion layer disposed between at least one said hydrophilic substrate layer and

- said membrane electrode assembly, the thickness of each said diffusion layer being more than about 5.0 microns and less than 25.0 microns.
 - 4, 5. (Cancelled)